

**THE ARB STAFF'S SUMMARY AND RATIONALE
FOR THE PROPOSED AMENDMENTS TO THE
AREA DESIGNATION CRITERIA FOR STATE STANDARDS**

**Air Quality Data Branch
DRAFT: October 10, 2003**

The California Health and Safety Code (H&SC) in section 39607(e) requires the Air Resources Board (ARB or Board) to establish area designation criteria. These designation criteria provide the basis for the Board to designate areas as attainment, nonattainment, nonattainment-transitional, or unclassified for the State ambient air quality standards (State standards), as required by H&SC section 39608. The Board first adopted designation criteria in 1989, and has amended the criteria several times since then.

In addition to establishing designation criteria, H&SC section 39607(e) requires the Board to periodically review the designation criteria to ensure its continued relevance. As part of the current review, the ARB staff recommends amending several provisions of the designation criteria. One amendment would add PM_{2.5} to the list of pollutants designated by air basin. The remaining amendments would not change the way in which the Board designates areas, but would simply clarify existing aspects of the designation criteria and assure consistency among the various provisions of the designation criteria. The proposed amendments are summarized in the following sections.

A. SECTION 70302: GEOGRAPHIC EXTENT OF DESIGNATIONS

The ARB staff proposes to add PM_{2.5} to the list of pollutants specified in section 70302(a) as designated by air basin.

Section 70302 of the designation criteria describes the geographic extent of the areas designated for each pollutant for which the Board makes area designations. Currently, section 70302 addresses the nine criteria pollutants for which State standards were in effect prior to 2003. These pollutants are: ozone, carbon monoxide, suspended particulate matter (PM₁₀), nitrogen dioxide, sulfur dioxide, sulfates, lead (particulate), hydrogen sulfide, and visibility reducing particles.

In 2002, the Board adopted a new State standard for fine particulate matter or PM_{2.5}. The new State PM_{2.5} standard, which became effective on July 5, 2003, is 12 micrograms per cubic meter, expressed as an annual arithmetic mean. Similar to the other nine criteria pollutants, the State PM_{2.5} standard is listed in CCR, title 17, section 70200 (Table of Standards). Because the designation criteria apply to all pollutants for which State standards have been established in CCR, title 17, section 70200, PM_{2.5} is already included under the general provisions of the

designation criteria. However, PM2.5 is not yet included in section 70302 of the designation criteria, which specifies the geographic extent of the area designated for each pollutant.

Section 70302 of the designation criteria specifies two default sizes for the designation area: an air basin for the regional pollutants (ozone, nitrogen dioxide, PM10, sulfates, and visibility reducing particles) and a county for the localized pollutants (carbon monoxide, sulfur dioxide, lead, and hydrogen sulfide). Because PM2.5 concentrations can potentially impact a large area, an air basin is the more appropriate default designation area. However, under the designation criteria, the Board may designate smaller areas if an evaluation of influencing factors indicates a smaller area is justified.

PM2.5 is a subset of PM10. It comprises a mixture of fine particles, many of which are secondary particles that are formed in the atmosphere. Because of their smaller size, PM2.5 particles can remain suspended in the air for long periods of time. The emissions that form PM2.5 come primarily from combustion sources. Throughout California, the major types of sources contributing to ambient PM2.5 concentrations include mobile sources, stationary sources, and biomass burning (which includes wood smoke and agricultural prescribed burning). While the extent of PM2.5 concentrations dominated by wood smoke may be more localized, PM2.5 concentrations dominated by mobile and stationary sources tend to be more regional in extent. Therefore, it is most reasonable to specify a large geographic area as the default designation area for PM2.5.

The staff proposes amending section 70302(a) of the designation criteria to add PM2.5 to the list of pollutants designated by air basin. Similar to the other pollutants listed in section 70302(a), the Board could designate smaller areas for PM2.5, as long as the Board finds that the smaller area has distinctly different air quality, deriving from sources and conditions not affecting the entire air basin. To the extent practical, these smaller areas would be defined along political boundary lines.

B. SECTION 70303.5(a)(1): REQUIREMENTS FOR OZONE NONATTAINMENT-TRANSITIONAL

The ARB staff proposes adding language to section 70303.5 to clarify the circumstances for designating a portion of a district within an air basin as nonattainment-transitional for ozone.

Under State law in H&SC section 40925.5(a), a district is designated as nonattainment-transitional for the State ozone standard by operation of law, if its' air quality meets certain conditions. To help implement this requirement, the Board added section 70303.5 to the designation criteria in December 1992. Section 70303.5 contains a set of guidelines for use in evaluating whether a district meets the requirements of H&SC section 40925.5(a).

In September 1998, the Board amended section 70303.5 to clarify that the nonattainment-transitional designation for ozone applies to a district or an area that is a portion of a district within an air basin. This is important in those cases where a district spans more than one air basin and the air quality differs in the various areas. The Board wanted to ensure that if the portion of a district within one air basin became nonattainment-transitional, that portion could be designated nonattainment-transitional before those portions of the same district located in another air basin(s) qualified as nonattainment-transitional. Although the Board intended that the portion of a district within an air basin should not be split in making a nonattainment-transitional designation, this is not clearly specified in the current language of section 70303.5.

The staff proposes adding language to section 70303.5(a)(1) that clarifies the Board's intent with respect to the area designated as nonattainment-transitional for ozone. The language would specify that an *entire* district or *entire portion* of a district within an air basin will be the area designated as nonattainment-transitional for ozone. These proposed amendments are for clarification only and do not change the way in which the ozone nonattainment-transitional designations are currently made.

C. APPENDIX 1: CRITERIA FOR DETERMINING DATA REPRESENTATIVENESS

The ARB staff proposes to expand the discussion in Appendix 1: Criteria for Determining Data Representativeness and make a minor change to the accompanying table, in order to clarify the procedure.

Appendix 1: Criteria for Determining Data Representativeness (Representativeness Criteria) describes the criteria the Board uses in determining whether an individual air quality measurement or statistic represents the averaging time specified in the State standard to which it is being compared. Under the designation criteria, air quality measurements and statistics used for making designations of nonattainment, nonattainment-transitional, and attainment must be representative.

The Representativeness Criteria lay out specific conditions that each individual air quality measurement or statistic (for example, an individual 8-hour average carbon monoxide concentration or a single annual average PM10 concentration) must satisfy in order to be deemed representative. These conditions generally require that a minimum of 75 percent of all the potential measurements be available.

The current Representativeness Criteria comprise a short description of the criteria, along with a table that sets out the specific criteria. Since the Board adopted the designation criteria in June 1989, the table in Appendix 1 has been a source of much confusion. The table lists the minimum requirements for each averaging time, starting with the averaging time of the initial measurement (usually 1-hour or 24-hours) and moving up from there, to an annual averaging time. It is possible that a person unfamiliar with using the Representativeness Criteria may be confused as to how far up

the table one must go in order to determine that an air quality measurement or statistic is representative.

To alleviate this confusion, the staff proposes to expand the discussion in Appendix 1 to clarify the procedure for determining data representativeness. The staff also proposes a minor change to the accompanying table to clarify requirements for pollutants that are not sampled on a daily basis (for example, some PM samples are collected on a 1-in-6 day, 1-in-3 day, or 1-in-2 day sampling schedule). These proposed amendments are for clarification purposes only and would not change the way in which the Board determines data representativeness or area designations.

D. APPENDIX 3: CRITERIA FOR DETERMINING DATA COMPLETENESS

Appendix 3: Criteria for Determining Data Completeness (Completeness Criteria) describes the criteria the Board uses in determining whether a group or set of individual air quality measurements or statistics is sufficient to reflect the time of day and season of the year during which high concentrations are expected to occur. Under the designation criteria, the set of air quality measurements or statistics used for making designations of attainment or nonattainment-transitional, must be complete.

The staff proposes adding language to the Completeness Criteria to clarify that these criteria apply only to data used for making attainment and nonattainment-transitional designations. Furthermore, the proposed amendments clarify that air quality data are evaluated under the Completeness Criteria after they are first evaluated under the Representativeness Criteria. Finally, the staff proposes adding language to clarify that the “Required Years” portion of the Completeness Criteria apply only for attainment designations.

E. OTHER AMENDMENTS

The ARB staff proposes to clarify within the existing designation criteria that the word “standard” refers to a State standard and not a federal standard.

The designation criteria in sections 70300 through 70306 and appendices 1 through 4, thereof, apply only to the State standards. In some cases, the State standards are specifically referenced. In other cases, they are referenced only as the standards. To clarify the fact that the State standards are the only ones subject to the provisions in the designation criteria and to make the references consistent throughout the designation criteria, the staff recommends adding the word “*state*” before all references to a standard. These proposed amendments are for clarification only and affect sections 70302, 70303, 70303.1, and 70304 and Appendix 2.

The staff proposes to clarify that the “appendices” referenced in the designation criteria are the appendices to the designation criteria.

The ARB staff proposes adding the words “*to this article*” to sections 70303.1 and 70303.5 and Appendix 3 to clarify that the appendix referenced is an appendix to the designation criteria. These proposed amendments are for clarification purposes only and do not change the way in which the Board determines the area designations.